AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-87. (Canceled)

88. (Currently Amended) A reference standard for a detectable entity, the reference standard comprising

a support medium and

a compact particle comprising a quantity of detectable entity ~~attached~~ chemically coupled to the compact particle,

wherein at least one dimension of the compact particle is less than 1500 μm,

wherein the compact particle does not express the detectable entity, and

wherein the compact particle is supported by the support medium.

89. (Previously Presented) The reference standard according to claim 88, wherein the compact particle is a biological compact particle.

90. (Previously Presented) The reference standard according to claim 88, wherein the compact particle comprises a cell.

91. (Withdrawn) The reference standard according to claim 88, in which the compact particle comprises a cellular organelle

92. (Previously Presented) The reference standard according to claim 88, in which the detectable entity is derived form a cell, tissue, organ, or organism, and is indicative of a disease or condition.

93. (Withdrawn) The reference standard according to claim 88, wherein the compact particle is a non-biological compact particle.

94. (Withdrawn) The reference standard according to claim 88, in which the compact particle comprises a microbead or a micelle.

95. (Previously Presented) The reference standard according to claim 88, in which a detectable amount of the detectable entity is present in one or more defined regions of the reference standard.

96. (Previously Presented) The reference standard according to claim 95, in which the defined region is a cross section of the reference standard.

97. (Previously Presented) The reference standard according to claim 88, in which the detectable entity is covalently attached to the compact particle.

98. (Previously Presented) The reference standard according to claim 88, in which the support medium comprises an embedding medium in which the detectable entity is embedded.

99. (Previously Presented) The reference standard according to claim 88, in which the detectable entity comprises an antigen, epitope, peptide, polypeptide, protein, nucleic acid, or combination thereof.

100. (Previously Presented) The reference standard according to claim 88, in which the presence of the detectable entity is revealable by binding to a binding agent.

101. (Previously Presented) The reference standard according to claim 88, wherein the embedding medium has a box shape and the compact particle is a cell.

102. (Previously Presented) The reference standard according to claim 88, comprising two or more compact particles each comprising different amounts of detectable entity.

103. (Previously Presented) The reference standard according to claim 88, in which the reference standard comprises a plurality of areas comprising the detectable entity at different densities.

104. (Previously Presented) The reference standard according to claim 103, further comprising a control, which control comprises a compact particle with substantially no detectable entity.

105. (Withdrawn) A kit comprising: (a) the reference standard according to claim 88 or a section of said reference standard; and (b) a binding agent capable of specific binding to the detectable entity of the reference standard.

106. (Withdrawn) The kit according to claim 105, further comprising a therapeutic agent capable of treating or alleviating at least one symptom of a disease or condition in an individual.

107. (Withdrawn) The kit according to claim 106, in which one or both of the binding agent and the therapeutic agent comprise an antibody against the detectable entity.

108. (Withdrawn and Currently Amended) A method of comparing the amount of a detectable entity in a biological sample with the amount in a reference standard, the method comprising:

(a) providing a biological sample and obtaining a first signal indicative of the amount of detectable entity in the biological sample;

(b) providing a reference standard or section thereof;

(c) obtaining a second reference signal indicative of the amount of detectable entity in the reference standard or section thereof;

(d) comparing the first signal obtained in (a) against the second reference signal obtained in (c); and optionally

(e) quantitating the first signal and the second reference signal;

wherein the reference standard comprises a support medium and a compact particle with a quantity of detectable entity ~~attached~~ chemically coupled thereto,

wherein at least one dimension of the compact particle is less than 1500 μm,

wherein the compact particle does not express the detectable entity, and

wherein the compact particle is supported by the support medium.

109. (Withdrawn) The method of claim 108, in which the biological sample comprises a cell, tissue, or organ of an individual suspected of suffering from or susceptible to a disease or condition.

110. (Withdrawn) The method of claim 108, wherein the method is employed to diagnose an individual as suffering from or as susceptible to a disease or condition if the amount of detectable entity in the biological sample is similar to or greater than the amount of detectable entity in the reference standard.

111. (Withdrawn) A method of assessing the effectiveness of a procedure, the method comprising:

(a) providing a reference standard according to claim 88, in which a detectable property of the detectable entity changes as a result of the procedure;

(b) performing the procedure on the reference standard; and

(c) detecting a change in the detectable property of the detectable entity.

112. (Withdrawn) The method of claim 111, in which the procedure is chosen from *in situ* hybridization, immunohistochemistry, deparaffination, antigen retrieval,

blocking, endogenous biotin blocking, endogenous enzyme blocking, washing, incubation with a staining agent, and incubation with a binding agent.

113. (Withdrawn) The method of claim 112, in which the procedure is antigen retrieval and the change in the detectable property of the detectable entity is masking or unmasking one or more epitopes.

114. (Withdrawn) The method of claim 112, in which the procedure is deparaffination and the change in the detectable property of the detectable entity is a change in the amount of detectable entity present following the deparaffination.

115. (Withdrawn) A modified cell comprising a detectable entity attached to a cell or component thereof, which cell does not express the detectable entity.

116. (Withdrawn) A method of establishing a cellular distribution of detectable entity in a reference standard, the method comprising providing a cell or component thereof which does not express a detectable entity, attaching a quantity of detectable entity to the cell or component thereof, and supporting the cell or component thereof in a support medium.